

## REMARKS/ARGUMENTS

### Rejection Under 35 U.S.C. §103

Claims 1 and 3-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Buck in view of Robson, newly cited Nanba, newly cited Kubota and newly cited Chang. Applicants respectfully traverse.

In order to establish a *prima facie* case of obviousness, the prior art references, when combined, must teach or suggest all the claim limitations. Claim 1 of the present application recites a "second liquid at an alkaline pH." As stated in Paper No. 24, Buck does not teach such "second liquid at an alkaline pH." Paper No. 24 relied upon Nanba to teach such claim limitation.

However, it is respectfully submit that Nanba does not teach such "second liquid at an alkaline pH." Rather, Nanba teaches the modification of pH prior to sonication for the purpose of optimizing hydantoinase and decarbamylase activity. Indeed, column 2 lines 52-64 of Nanba states:

In these two enzymatic reactions for converting 5-substituted hydantoins into D- $\alpha$ -amino acids, in general, the optimal pH of the hydantoinase reaction is pH 8 to 9 and the solubility of the substrate is increased as increase in pH. In addition, the racemic reaction of the hydantoin ring is promoted in an alkaline range. Therefore, it is desired to carry out the hydantoinase reaction in the pH ranging from 7 to 10, preferably in an alkaline range. On the other hand, in general, the optimal pH of the decarbamylase reaction is pH 6.5 to 9.0 but the hindrance of the reaction by ammonia formed is remarkably increased as increase in pH. Therefore, it is desired to carry out the decarbamylase reaction at pH about neutrality.

Thus, the adjustment of pH to 8.5 in Example 5 was to optimize hydantoinase activity, not to disrupt the cell as presently claimed. Therefore, Nanba neither teaches nor suggests a "second liquid at an alkaline pH" as recited in claim 1. Further, neither Robson nor Kubota nor Chang have been shown to teach or suggest a "second liquid at an alkaline pH." Accordingly, since the cited references neither teach nor suggest each claim limitation, a *prima facie* showing of obviousness has not been made and the rejection should be withdrawn.

**Rejection Under 35 U.S.C. §102**

Claim 8 was rejected under 35 U.S.C. §102(e) as being anticipated by Kubota in light of Chang. Applicants respectfully traverse.

Applicants respectfully submit that a rejection under 35 U.S.C. § 102(e) cannot combine references. Indeed, MPEP §706.02 (p.700-20) states: “for the anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.” Accordingly, Applicants respectfully submit that the rejection under 35 U.S.C. § 102(e) based upon more than one reference was improper and should be withdrawn.

**Rejection Under 35 U.S.C. §103**

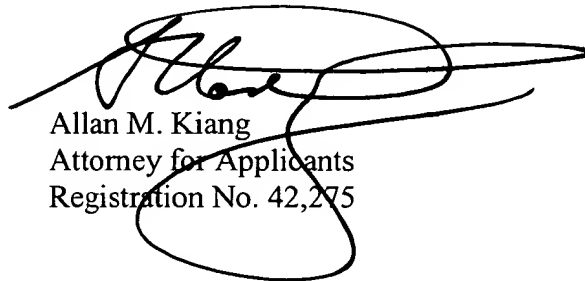
Claims 8-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Buck in view of Kubota, Chang, Robson and Nanba. Applicants respectfully traverse.

Applicants have amended claim 8 to depend upon claim 1. Rejected claims 9 through 13 depend from claim 8. For the reasons stated above, Nanba neither teaches nor suggests a “second liquid at an alkaline pH” as recited in amended claim 8. Further, neither Robson nor Kubota nor Chang have been shown to teach or suggest a “second liquid at an alkaline pH.” Accordingly, since the cited references neither teach nor suggest each claim limitation, a *prima facie* showing of obviousness has not been made and the rejection should be withdrawn.

**Conclusion**

The claims of the present application are believed to be in condition for allowance and early notice thereof is respectfully requested.

Respectfully submitted,



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